Yukinori YAMAMOTO*: Two new species of myxomycetes from Central Nepal

山本幸憲*: ネパール産変形菌の 2 新種

Recently I received for identification many interesting Nepalese specimens of myxomycetes from Dr. Hiromitsu Hagiwara of the Tukuba Botanical Garden, National Science Museum, Tsukuba. Among them there were two peculiar species. One was an *Arcyria* which had golden globose sporangia, and the other was a *Lamproderma*-like one with silvery persistent peridium. As the result on my investigation, I think they represent species new to science. They are described and illustrated herein. Color names are used according to Kornerup et al. (1978).

1) **Arcyria aureoglobosa** Y. Yamamoto, sp. nov. (Fig. 1)

Sporangia gregaria, aurea vel cinereo-aurea, globosa vel ovoidea, usque ad 1.8 mm alta et 0.8 mm diam. Peridium subpersistens, nitens, membranaceum. Stipes ad 2/5–3/5 totae attingens. Calyculus plicatus, circa ad 1/2 sporangii metiens. Capillitium reticulum laxum formans, tubi ca. 3.2–6.5 μm diam. cum verrucis et spinulis. Sporae globosae, 7.0–8.0 μm diam., paene incoloratae luce transmissa, verrucis minutis et aliquot verrucis majoribus dispersis instructae. Plasmodium ignotum.

Sporangia gregarious, stipitate, golden yellow or grayish yellow, globose to obovoid, 1.4–1.8 mm in total height, up to 0.8 mm in diameter. Peridium nearly persistent, shining, membranous, translucent, dehiscing irregularly above, leaving lower part as a thicker cup. Hypothallus discoid with radial protrusions, translucent to dark. Stalk striate, concolorous with the peridium, gradually becoming darker and more attenuated towards the base, 2/5–3/5 of the total height, filled with spore-like cysts up to 20 μm. Calyculus plicate, usually clearly defined but sometimes not, about a half the diameter of the sporangium, closely but delicately and irregularly reticulate and warted on the inner surface. Capillitium consisting of a network of only slightly elastic threads, threads light

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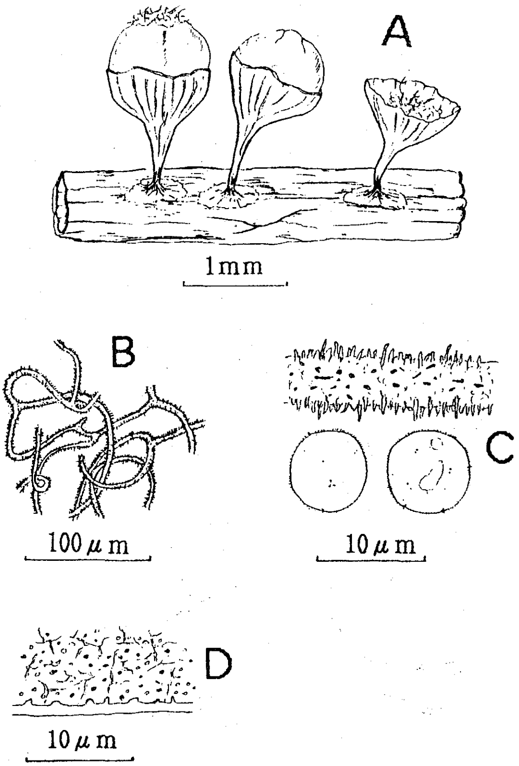

Fig. 1. *Arcyria aureoglobosa* Y. Yamamoto. A: Three sporangia. B: Capillitium. C: Enlarged capillitium thread and two spores. D: Markings of the inner surface of the calyculus.

yellow, densely marked with warts and spines of up to 1.7 µm in height, rarely with half-rings, 3.2–6.5 µm (mean=5.0, sd=0.98, no=20) in diameter including markings, 2.1–4.5 µm (mean=3.4, sd=0.60, no=20) in diameter without markings, firmly attached to the inner surface of the calyculus. Spores globose, orange yellow in mass, nearly colorless or somewhat yellowish in transmitted light, minutely verruculose with a few larger scattered warts, 7.0–8.0 µm (mean =7.5, sd=0.35, no=20) in diameter (not including episporic sculptures). Plasmodium unknown.

Holotype: TNS-NE-88-11 (On fallen twig, Lama Hotel—Ghora Tabela, Langtang, Nepal. Leg. Hiromitsu Hagiwara, Nov. 4 1988, in TNS).

This species is similar to *Arcyria pomiformis* (Leers) Rost. in color and

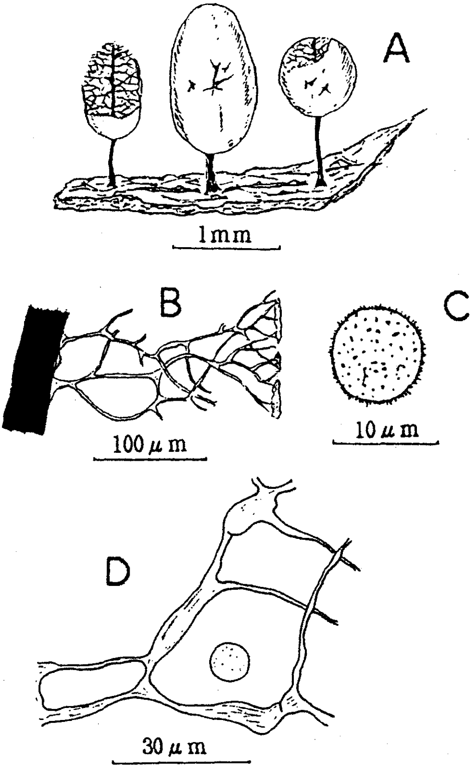

Fig. 2. *Stemonaria argentella* Y. Yamamoto. A: Three sporangia. B: Columella, capillitium and some flakes of the peridium. C: A spore. D: Middle part of the capillitium with some expansions and a spore.

shape, but differs in the larger *Trichia*-like figure, deeper calyculus and larger capillitium. It is also similar to *A. globosa* Schw. (with sporangia whitish, grayish or pale yellowish), *A. margino-undulata* Nann.-Brem. & Y. Yamamoto (with whitish sporangia), and *A. olivaceoglobosa* Farr (with sporangia grayish or brownish olive) in shape, but differs from them in its golden yellow color.

2) **Stemonaria argentella** Y. Yamamoto, sp. nov. (Fig. 2)

Sporangia gregaria, globosa, ovoidea vel oblonga usque ad 1.7 mm alta et 0.8 mm diam. Peridium aliquantum iridescens, argenteum vel nigrum, persistens. Stipes nigrus, ad 1/5-3/5 totae metiens. Columella paene apicem sporangii attingens. Capillitium ramificans et reticulum laxum interiorum formans, interdum cum expansionibus, sine reticuliis superficialibus. Sporae globosae vel subglobosae, cinereo-brunneae luce transmissa, spinulosae, 7.9–8.7 μm diam. Plasmodium ignotum.

Sporangia gregarious, stipitate, erect, globose to ovoid varying to oblong, up to 1.7 mm in total height, 0.8 mm in diameter. Peridium membranous, somewhat iridescent, silvery (medium gray) to nearly black, persistent, frequently remaining somewhere as flakes. Hypothallus inconspicuous. Stalk striate, nearly black in reflected light, in transmitted light opaque, vaguely longitudinally striate, 1/5–3/5 of the total height. Columella a continuation of the stalk, reaching almost to the apex, nearly black, attenuate. Capillitium arising from the columella along its whole length, divided into many branchlets forming lax, polygonal or somewhat rounded inner nets, the threads gradually attenuated towards the periphery, reddish to dark brown, sometimes with partial membranous expansions, tips free, pointed sometimes blunted, rarely somewhat expanded, frequently attached to the flakes of the peridium. Spores globose or subglobose, nearly black in mass, grayish brown in transmitted light, spinulose, sometimes with paler area of germ pore on one side, 7.9–8.7 μm (mean=8.3, sd=0.29, no=20) in diam. excluding episporic markings. Plasmodium unknown.

Holotype: TNS-NE-88-77 (On plant litter in *Abies* forest, Jumbesi, Nepal. 3250 m alt. Leg. Masanobu Higuchi, Oct. 10 1988, in TNS).

This species is somewhat similar to *Comatricha fusiformis* (Kowalski) Kowalski in the iridescent, persistent peridium, but differs in the smaller spores (*C. fusiformis* has spores 12–14 μm in diam). It is also similar to *C. suksdorfii* Ellis & Ev. (with spores 10–12 μm in diam.) in shape, but differs in less flexuous capillitium, smaller spores and usually persistent peridium. From *C. kowalskii* Lakhanpal & Mukerji (with minutely warted spores 6–8 μm in diam.), and *C. martinii* Nanir (with warted spores, warts forming a few clusters, 6.5–7.5 μm in diam.), it differs in the larger spores.

This species is adequately placed in the genus *Stemonaria* recently proposed by Nannenga-Bremekamp et al. (1984), because the stalk is neither fibrous nor netted (and so it does not belong in *Comatricha* or *Paradiachea*), no surface nets are formed and the stalk is not hollow (neither in *Stemonitis* nor in *Stemonitopsis*), and the columella reaches nearly to the apex (not in *Lamproderma*).

I deeply appreciate Dr. Hiromitsu Hagiwara and Dr. Masanobu Higuchi

(collector of the second species described above) for giving me a good opportunity to study Nepalese specimens.

Literature cited

Kornerup. A. & J.H. Wanscher (rev. Pavey D.) 1978. Methuen Handbook of Colour ed. 3. Eyre Methuen, London. Nannenga-Bremekamp N.E., Y. Yamamoto & R. Sharma 1984. *Stemonaria*, a new genus in the Stemonitaceae and two new species of *Stemonitis* (Myxomycetes). Proc. Kon. Ned. Akad. Wet. C. 87: 449-469.

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最近，国立科学博物館筑波実験植物園の萩原博光氏よりネパール産の変形菌標本を多数受け取った中に，二つの興味深い標本があった。一つは外皮が残存性で銀色がかったステモニチス科の一種で，他の一つは胞子嚢が丸く，金色がかった一見トリキア属の一種と見間違いそうなアルキリア属の一種であった。共に新種としてここに報告した。

□ Robertson, S.A.: **Flowering plants of Seychelles** 327 pp. 1900. Royal Botanic Gardens, Kew. ¥4,320. 昆虫学者の夫と共に6年間セイシェル諸島に滞在した著者が，自生・導入を問わず書き留めた植物のチェックリストである。1140種のうち3/4が導入種とのことである。学名と産地の記号，短い記相文で統一され，ところどころにきわめて簡単な線画が挿入されている。有名なフタゴヤシ（*Lodoicea maldivica*）も同じ扱いである。本書は1982年には脱稿していたが，出版までにあちこちたらい廻しされていたようである。 （金井弘夫）

□ Warren, L. et al.: **Manual of the flowering plants of Hawaii** 2 vols. 1, 853 pp. 1990. Bishop Museum. ¥18,700. ハワイ諸島の完全な植物誌．ちょうど大井：日本植物誌のような感じである。シノニムが細かく引用され，土名とともに巻末の索引でたどれるようになっている。240頁におよぶ線画が（各頁に4種）が各所に挿入され，巻末にその証拠標本のリストがある。ほかに引用文献と用語説明がある。 （金井弘夫）